



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,229	03/01/2005	Karsten Bo Rasmussen	66722-070-7	6761
25269 7590 02/15/2008 DYKEMA GOSSETT PLLC FRANKLIN SQUARE, THIRD FLOOR WEST 1300 I STREET, NW WASHINGTON, DC 20005			EXAMINER ENSEY, BRIAN	
			ART UNIT 2615	PAPER NUMBER
			MAIL DATE 02/15/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/526,229

Applicant(s)

RASMUSSEN ET AL.

Examiner

Brian Ensey

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6-8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/1/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

The disclosure is objected to because of the following informalities: The following pages and lines listed contain references to features of the claims. These references must be deleted since the structure of the claims may change during prosecution of the present application. Page 2, line 18 "according to claim 1"; page 2, line 33 "according to claim 2"; page 3, line 13 "According to claim 3"; page 3, line 22 "According to claim 4"; page 3, line 30 "as claimed in claim 5"; page 6, line 4 "as claimed in claim 6"; and page 4, line 12 "as claimed in claim 7". Additionally, page 7, line 32 states "In fig. 3 a transducer 10..." however, reference designator 10 does not appear in fig. 3.

Appropriate correction is required.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: See items 1, 2 and 3 in figures 1 and 2. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing

on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Svean et al. U.S.

Patent No. 6,754,359 B1.

Regarding claim 1, Svean discloses a method for counteracting the occlusion effect of an electronic device delivering an audio signal to the ear, like a hearing aid or an active ear protector (1,2), where the electronic device comprises a transmission path with an external microphone (M1) or input line, which receives a signal P_{ES} from the environment and a signal processor (E3) and a receiver (SG) which receives a processed signal from the signal processor and delivers sound signals to the ear, whereby an ear piece is inserted into the ear canal and

totally or partially blocks the canal whereby the sound conditions in the cavity between the ear piece and the tympanic membrane(4) are directly or indirectly determined, and whenever conditions leading to occlusion problems are determined, the transmission characteristic of the transmission path to the receiver counteracts the occlusion effect (See Figs. 1 and 2, col. 5, lines 29-51 and col. 7, lines 26-56) (M1 and the signal processor provide an output signal to the receiver to provide an output that has the same characteristics as the user's voice without an ear piece installed, i.e. it removes the occlusion effect).

Regarding claim 2, Svean further discloses the conditions leading to occlusion are determined by monitoring the activity of the users own voice (Through M2, See col. 7, lines 47 and 48), and when own voice activity is detected, the amplification through the signal processor in the frequency region below 1 kHz is reduced (The occlusion effect which is primarily due to low frequency sounds i.e. $< 1\text{kHz}$ as discussed in the applicant's disclosure page 1, lines 11-21. Svean teaches the signal from M2 is amplified and processed by DSP E3, filtered by 23, 24, 25 and output to receiver SG thereby reducing the amplification $< 1\text{ kHz}$ to remove the occlusion effect. See figs. 1-4 and col. 7, line 43 to col. 8, line 17).

Regarding claim 3, Svean further discloses the sound conditions in the cavity are monitored by an additional microphone (M2) which is acoustically coupled to the cavity, whereby the signal from the additional microphone is used in a feedback loop (E4-E4-E3-E7-E6-SG) to the receiver in order to attenuate the low frequency part of the sound in the cavity (M2 picks up sound in the sound cavity and feeds back the signal to the signal processor to be compared to the incoming signal from M1 and provide an output signal to the receiver to provide an output that has the same characteristics as the user's voice without an ear piece installed, i.e. it

removes the occlusion effect which is primarily due to low frequency sounds as discussed in the applicant's disclosure page 1, lines 11-21).

Regarding claim 4, Svean further discloses the signal processor amplifies the low frequency part of the signal from the external microphone (See col. 7, lines 45-56) in order to compensate for the attenuation of the useful part of the signal from the external microphone (M2 picks up sound in the sound cavity and feeds back the signal to the signal processor to be compared to the incoming signal from M1 and provide an output signal to the receiver to provide an output that has the same characteristics as the user's voice without an ear piece installed, i.e. it removes the occlusion effect which is primarily due to low frequency sounds as discussed in the applicant's disclosure page 1, lines 11-21) or input line.

Regarding claim 5, Svean further discloses the feed back loop from the additional microphone is activated by own voice activity of the user (See col. 7, lines 45-51).

Allowable Subject Matter

Claims 6-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Ensey whose telephone number is 571-272-7496. The examiner can normally be reached on Monday - Friday 6:00 AM - 2:30 PM.

Application/Control Number:
10/526,229
Art Unit: 2615

Page 6

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any response to this action should be mailed to:

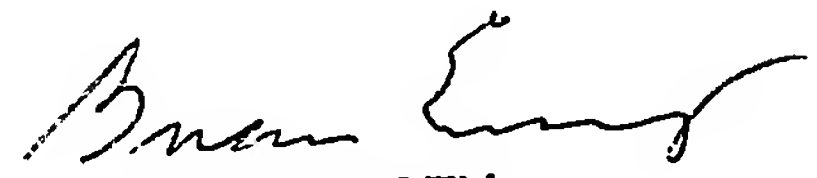
Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, Va. 22313-1450

Or faxed to:

(571) 273-8300, for formal communications intended for entry and for informal or draft communications, please label "PROPOSED" or "DRAFT".
Hand-delivered responses should be brought to:

Customer Service Window
Randolph Building
401 Dulany Street
Arlington, VA 22314

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


BRIAN ENSEY
PRIMARY EXAMINER
2/11/08